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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/631,947
Filing Date: July 30, 2003
Appellant(s): CHEN ET AL.

Mindspeed Technologies, Inc
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 11/12/2009 appealing from the Office action mailed 01/22/2009.

(1) Real Party in Interest

The real party in interest is Mindspeed Technologies, Inc. of Newport Beach, California, as evidenced by the assignment at reel 014356/ Frame 0415.

(2) Related Appeals and Interferences

The brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief. Therefore, it is presumed that there are none. The Board, however, may exercise its discretion to require an explicit statement as to the existence of any related appeals and interferences.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

No amendment after final has been filed.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

Applicant's Admitted Prior Art (AAPA)

Schulzrinne et al. ("RTP Payload for DTMF Digits, Telephony Tones and Telephony Signals", Internet-Draft, November 28, 1999, IETF; hereafter Schulzrinne)

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 6, 7, 9, 12, 13, 15, 18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Schulzrinne et al. ("RTP Payload for DTMF Digits, Telephony Tones and Telephony Signals", Internet-Draft, November 28, 1999, IETF; hereafter Schulzrinne).

With respect to claims 1 and 7, AAPA discloses a communication technique using a first gateway (120 of Figure 1), a first modem (110 of Figure 1), a telephone line between the first gateway and the first modem (114, 112 of Figure 1), a second gateway (140 of Figure 1), a second modem (150 of Figure 1), a telephone line between the second gateway and the second modem (142, 144 of Figure 1) and a packet network for communication between the first gateway and the second gateway (130 of Figure 1). AAPA explains when the second modem receives a call setup request from the first modem (page 3, lines 9-14) the second modem sends an answer tone to the second gateway (page 3, lines 18-20). The answer tone is received, detected, and processed

by the first gateway (pg 4, lines 8-9). The first gateway also detects a phase reversal in the answer tone (pg 4, lines 21-22) so that its echo canceller is disabled.

However, AAPA fails to disclose transmitting a first message to indicate an answer tone to the second gateway over the packet network and sending a second message indicating a phase reversal to the second gateway over the packet network.

Schulzrinne discloses a method for telephone gateways connected to packet networks where the gateway sends an encoded audio event packet (pg 3, section 3.2; event packet is a message) for fax-related tones (pg 8, section 3.11) including an ANS (answer tone) and /ANS (answer tone with phase reversals) encoded with decimal values of 32 and 33 (pg 10, table 3). The audio event packet is sent by a gateway to another gateway or receiver (pg 2, Section 2, last partial paragraph) as soon as the audio event is recognized or detected (pg 5, section 3.6, first sentence).

Schulzrinne realizes the benefit of improved tone response by using event packets instead of low-rate voice codes which cannot guarantee the quality of tone signals (pg 1, section 1, first and second paragraphs). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the event packets of Schulzrinne to send messages for the answer tone and phase-reversed answer tone detection events in AAPA.

With respect to claims 13 and 18, AAPA discloses a communication technique using a first gateway (120 of Figure 1), a first modem (110 of Figure 1), a telephone line between the first gateway and the first modem (114, 112 of Figure 1), a second gateway

(140 of Figure 1), a second modem (150 of Figure 1), a telephone line between the second gateway and the second modem (142, 144 of Figure 1) and a packet network for communication between the first gateway and the second gateway (130 of Figure 1). AAPA explains when the first gateway receives a call setup request from the first modem (page 3, lines 9-14) the first gateway calls the second gateway (page 3, line 10). An answer tone, sent by the second modem, is received, detected, and processed by the first gateway (pg 4, lines 8-9). The first gateway also detects a phase reversal in the answer tone (pg 4, lines 21-22) so that its echo canceller is disabled.

However, AAPA fails to disclose transmitting a first message to indicate an answer tone to the second gateway over the packet network, sending a second message indicating a phase reversal to the second gateway over the packet network, and disabling an echo canceller in response to the second message indicating a phase reversal.

Schulzrinne discloses a method for telephone gateways connected to packet networks where the gateway sends an encoded audio event packet (pg 3, section 3.2; event packet is a message) for fax-related tones (pg 8, section 3.11) including an ANS (answer tone) and /ANS (answer tone with phase reversals) encoded with decimal values of 32 and 33 (pg 10, table 3). The audio event packet is sent by a gateway to another gateway or receiver (pg 2, Section 2, last partial paragraph) as soon as the audio event is recognized or detected (pg 5, section 3.6, first sentence). The /ANS event packet will disable echo cancellers (pg 8, section 3.11, **/ANS**).

Schulzrinne realizes the benefit of improved tone response by using event packets instead of low-rate voice codes which cannot guarantee the quality of tone signals (pg 1, section 1, first and second paragraphs). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the event packets of Schulzrinne to send messages for the answer tone and phase-reversed answer tone detection events in AAPA.

With respect to claims 3, 9, 15, and 20, AAPA does not disclose a packet message that indicates an amplitude-modulated answer tone with phase reversal.

Schulzrinne discloses an encoding symbol for an amplitude-modulated answer tone with phase reversal (pg 8, Section 3.11 Data Modem and Fax Events; see **/ANSam**).

Schulzrinne realizes the benefit of improved tone response by using event packets instead of low-rate voice codes which cannot guarantee the quality of tone signals (pg 1, section 1, first and second paragraphs). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the event packets of Schulzrinne to send messages for the answer tone and phase-reversed answer tone detection events in AAPA.

With respect to claims 6 and 12, AAPA further discloses that the second gateway also has an echo canceller that is disabled when an answer tone is detected (pg 4, lines 21-22).

AAPA does not disclose receiving a packet message that indicates an answer tone with a phase reversal from the first gateway.

Schulzrinne discloses an encoding symbol for an answer tone with phase reversal (pg 8, Section 3.11 Data Modem and Fax Events; see **/ANS**).

Schulzrinne realizes the benefit of improved tone response by using event packets instead of low-rate voice codes which cannot guarantee the quality of tone signals (pg 1, section 1, first and second paragraphs). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the event packets of Schulzrinne to send messages for the answer tone and phase-reversed answer tone detection events in AAPA.

(10) Response to Argument

3. Appellant's arguments filed on 11/12/2009 have been fully considered but they are not persuasive.

(A) Appellant argues with respect to claims 1, 7, 13, and 18, see page 12 (first full paragraph), that "Appellant respectfully submits that AAPA and Schulzrinne, individually or in combination, fail to disclose, teach, or suggest the following elements of claim 1: 'detecting an answer tone transmitted from said first modem over said first communication line in response to said placing; transmitting a first message indicative of said answer tone to said second gateway device over said packet network; detecting a phase reversal in said answer tone; and transmitting a second message indicative of said phase reversal to said second gateway device over said packet network.'"

The Examiner maintains the 103(a) rejection over AAPA in view of Schulzrinne because the combination of Schulzrinne teaching's with AAPA discloses the claimed invention. Schulzrinne teaches an audio event packet is sent by a gateway to another

gateway or receiver (pg 2, Section 2, last partial paragraph) as soon as the audio event is recognized or detected (pg 5, section 3.6, first sentence) and when one of ordinary skill in the art modifies AAPA to include the messages (audio event packet) as taught by Schulzrinne a predictable and functional method would result.

(B) Appellant argues with respect to claims 1, 7, 13, and 18, see page 13 (first full paragraph), that "because the phase reversal appears every 40ms, 'the audio event' for either ANS or /ANS is not recognized or detected in Schulzrinne until over 450ms into the answer tone detection. Appellant respectfully submits that there is no disclosure, teaching or suggestion in Schulzrinne that an audio event distinguishing ANS and /ANS (or ANSam or /ANSam) occurs prior to 450ms after the start of the answer tone."

The Examiner maintains the 103(a) rejection over AAPA in view of Schulzrinne because Schulzrinne teaches that as soon as an audio event is detected then the audio event is sent by one gateway to another gateway. When the answer tone is recognized then a message to indicate answer tone recognition is sent; and when answer tone with phase reversal is recognized then a message to indicated answer tone with phase reversal is sent. A feature for distinguishing the ANS audio event from the /ANS audio event is not found in the pending claims 1, 7, 13, and 18.

(C) Appellant argues with respect to claims 1, 7, 13, and 18, see pages 13 to 14 (paragraphs starting at end of page 13 and ending at top of page 14) that "Appellant respectfully submits that there is no disclosure, teaching, or suggestion in Schulzrinne that when a first gateway mode detects an answer tone, the first gateway modem

transmits an ANS message to a second gateway modem, and that when the first gateway modem later detects a phase reversal in the answer tone, the first gateway modem transmits an /ANS message to the second gateway modem following the transmission of the ANS message."

The Examiner maintains the 103(a) rejection over AAPA in view of Schulzrinne because Schulzrinne teaches sending a message for an audio event when the audio event is detected (pg 5, section 3.6, first sentence).

(D) Appellant argues with respect to claims 1, 7, 13, and 18, see page 14 (first full paragraph) that "the AAPA and Schulzrinne, individually or in combination, fail to disclose, teach or suggest anything more that the conventional art, and that more than a single message is transmitted for detecting an answer tone with phase reversal".

The Examiner maintains the 103(a) rejection over AAPA in view of Schulzrinne and view the combined teachings as sending one message for detecting an answer tone and sending one message for detecting an answer tone with phase reversal as recited in the pending claims 1, 7, 13, and 18.

(E) Appellant argues with respect to claims 1, 7, 13, and 18, see page 15 (first full paragraph) that "the accompanying to Exhibits A, B, C, and D, in the Evidence Appendix, attached hereto, which clearly show that not only those of ordinary skill in the art did not interpret Schulzrinne to disclose what the Examiner has alleged, but, in fact, even 'experts' in the field understood that Schulzrinne had a major shortcoming that needed to be cured in a revised RFC 2833."

The Examiner maintains the 103(a) rejection over AAPA in view of Schulzrinne because the combination of the two references meets the feature of the pending claims 1, 7, 13, and 18. Albeit the Schulzrinne references may be viewed as having shortcoming, it still teaches audio event detection to cause a gateway to send a message, the ANS message, and the /ANS message.

(F) Appellant argues with respect to claims 1, 7, 13, and 18 concerning remarks on written evidence, see pages 17 to 18 (last partial paragraph [pg17] to first partial paragraph [pg18]) that "Appellant respectfully disagrees with the above statements.... The Evidence that has been submitted shows that 'experts' in the field (and not just those of ordinary skill in the art), at the time, believed that addressing the shortcoming in the art (i.e. sending two messages instead of one) would in fact change how you (ie. IETF) have defined these events in RFC 2833. Therefore, Schulzrinnee does not stand for what it has been cited for."

The Examiner maintains the 103(a) rejection over AAPA in view of Schulzrinne because the combination of the two references meets the features of the pending claims 1, 7, 13, and 18. The claims recite sending two messages and Schulzrinne teaches sending two messages, one for a tone detection and one for a tone detection with phase reversal.

(G) Appellant argues with respect to claims 1, 7, 13, and 18 concerning the motivation for combining AAPA and Schulzrinne, see page 18 (first full paragraph) that "It is respectfully submitted that there is no teaching or suggestion by this cited benefit to extend the disclosure of Schulzrinne to stand for sending two messages, i.e.

transmitting a first message indicative of said answer; detecting a phase reversal in said answer tone; and transmitting a second message indicative of the phase reversal."

The Examiner maintains the 103(a) rejection over AAPA in view of Schulzrinne because the combination of the two references meets the features of the pending claims 1, 7, 13, and 18 and Schulzrinne provides a benefit for using packet messages to indicate the detection of audio events. Schulzrinne teaches an audio event packet is sent by a gateway to another gateway or receiver (pg 2, Section 2, last partial paragraph) as soon as the audio event is recognized or detected (pg 5, section 3.6, first sentence) and a benefit of improved tone response by using event packets instead of low-rate voice codes which cannot guarantee the quality of tone signals (pg 1, section 1, first and second paragraphs).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Brian T. O'Connor/
Patent Examiner, GAU 2475

February 24, 2010

Art Unit: 2475

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